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A Sea Change for Our National Ocean Policy

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Do You *Really* Know the Ocean.....?

You might know a lot about tides and creatures. But how much do you know about the importance of the oceans as a resource? Test your knowledge about the state of our oceans, and our ocean economy.

How important is the ocean to the U.S. economy?

- The ocean economy contributed more than \$117 billion to our economy and supported in excess of 2 million jobs, of which three-quarters of the jobs and one-half of the economic value were produced by ocean-related tourism and recreation. This equates to 1.5 times the number of jobs supported by agriculture and 2.5 times the economic output of farming. Coastal watershed counties account for slightly less than half of the U.S. economy and coastal zone counties for about one-third of the economy.

How important is the coastal zone to the U.S. economy?

- More than \$1 trillion, or one-tenth of the nation's gross domestic product (GDP) and 16 million jobs are generated within the near shore area, the relatively narrow strip of land immediately adjacent to the coast. If all coastal watershed counties are included, then the contribution increases to more than \$4.5 trillion, HALF of the nation's GDP, and 60 million jobs!

How is the coastal population changing?

- Since 1970, the coasts have experienced a relatively stable rate of population growth, contrary to popular belief. The coastal watershed counties (25% of the nation's land area) have served consistently as home to ~52% of the U.S. population during the past three decades. Between 1970 and 2000, the population of the coastal watershed counties grew by 37 million people, and is projected to increase another 21 million by 2015. This averages out to 1.1 million new people each year. Population densities in these areas are 2-3 times higher than that of the nation as a whole.

How much of the ocean do we (the U.S.A.) manage?

- The U.S. has jurisdiction over 3.4 million sq. nautical miles of ocean territory in its EEZ (Exclusive Economic Zone extending out 200 miles), which is larger than the combined land area of all 50 states.

* These facts come from the U.S. Ocean Commission Policy Report, 2004. <www.oceancommission.gov>

A Sea Change for Our National Ocean Policy

by Nancy C. Balcom

*There's a sea change a'comin'...
can you feel the surf lapping at your toes?*

No, the tide is not coming in higher than normal and there is no need to head inland. But for those of us with any interest in, or love for the ocean, there *is* cause for celebration. The “sea change” to which I’m referring is the approval of the Draft Final Report, *An Ocean Blueprint for the 21st Century*, by the U.S. Commission on Ocean Policy on July 22, 2004. This report is expected to guide our national ocean policy for years to come. Following its unanimous approval by the Commission (USCOP), the report was then sent to the President and Congress, and we eagerly await their respective responses and action.

How did we get here?

Earlier this year, the USCOP issued its preliminary report to the Governors and other interested parties after two years of effort reviewing scientific and technical information, and convening public hearings. Mandated by the *Oceans Act of 2000* (P.L. 106-256), the 400+ page report contained nearly 200 recommendations that, if enacted, would provide a “balanced approach to protecting the marine environment while sustaining the vital role oceans and coast play in our lives and national economy.”* The impact of the recommended changes could be far-reaching, both economically and environmentally. According to the USCOP web site, the final draft report takes into consideration the 600 pages of comments received from 37 governors, five tribal leaders, one regional governors association, 800 interested

stakeholders, and other technical experts. The reports, USCOP meeting minutes, and public comments can be reviewed or downloaded from this web site.

The oceans have an enormously critical role in the U.S. economy that cannot be overlooked or downplayed.

By passing the *Oceans Act of 2000*, Congress re-emphasized the importance that the oceans have for our country. Pursuant to the Act, President Bush named 16 individuals to comprise the Ocean Commission, representing diverse backgrounds and interests (see box, p. 9). The Commissioners’ charge was to “establish findings and develop recommendations for a new comprehensive national ocean policy”. Three decades ago, in a report called *Our Nation and the Sea*, the last comprehensive review of national ocean policy was issued by the Stratton Commission. Among other things, that report led to the establishment of the National Oceanic and Atmospheric Administration (NOAA) in 1970, and the enactment of the Coastal Zone Management Act in 1972.

Although the nascent NOAA, embedded in the Department of Commerce, lacked cabinet status and control over many federal marine activities, it did become a “center of federal ocean expertise,”

bringing together a number of programs including the Bureau of Commercial Fisheries (precursor to the National Marine Fisheries Service) and the Sea Grant Program. While progress was made in meeting some of the Stratton Commission's recommendations, the USCOP report documents how our coastal areas have continued to develop and change, and outlines much more that needs to be done.

The report makes it very clear that the oceans have an enormously critical role in the U.S. economy that cannot be overlooked or downplayed. It’s important that action starts now, so that momentum is not lost and fickle attention spans turn elsewhere. As Commission Chairman Retired U.S. Navy Admiral James D. Watkins said recently, “Reform of national ocean policy needs to start this year, and accelerate next year and the year after, while it is still possible to reverse distressing declines, seize exciting opportunities, and sustain the oceans, coasts, and their valuable assets for future generations. We can’t wait even five or ten years to make changes or it will be too late.”

Our Oceans are Invaluable

The report is divided into ten parts and 31 chapters. It is clearly a LOT to digest, but is well-written and contains a wealth of interesting facts and figures that illustrate how closely our national economy and well-being are tied to the oceans. In fact, to better understand and emphasize those ties, the USCOP

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* USCOP, 2004

partnered with the National Ocean Economics Project to complete an economic study called “Living Near...And Making a Living From...The Nation’s Coasts and Oceans”, which is included as Appendix C in the Commission report. The report makes the distinction between the **ocean economy** and the **coastal economy**, and summarizes some interesting facts and figures. For example, the value of goods handled by the nation’s ports is \$700 billion annually; the cruise industry and its passengers contribute \$11 billion to the economy annually; commercial fishing and recreational salt-water angling are valued at \$28 billion and \$20 billion annually, respectively; retail expenditures on recreational boating is a \$30 million per year sector; and the U.S. retail trade in ornamental fish is worth about \$3 billion per year (USCOP, 2004). Some intangibles with values difficult to quantify (e.g. clean water, safe food, healthy habitats, good environments in which to live and recreate) are nonetheless equally important contributions of the oceans and coasts.

Shifting Management Styles to Focus on Ecosystems

The USCOP report recommends a number of critical actions, some of which are summarized in the following paragraphs. While some can be formally adopted and more easily implemented, others will literally take an “Act of Congress” to come to fruition. To achieve an effective U.S. ocean policy, the Commissioners strongly propose that traditional management philosophies and principles be exchanged for a principle of **ecosystem-based management**. This type of management is founded in an understanding of ecosystems, and “accounts for and addresses the complex interrelationships among the ocean, land, air, and all living crea-

Definitions (USCOP preliminary report, 2004)

ocean economy – that portion of the economy which relies on the ocean as an input to the production process or which, by virtue of geographic location, takes place on or under the ocean.

coastal economy – that portion of economic activity which takes place on or near the coast.

coastal zone counties – all counties that fall at least partly within a state’s coastal zone, as defined under the Coastal Zone Management Act.

coastal watershed counties – those counties with at least 15% of their land area in a coastal watershed.

ecosystem-based management – whereby U.S. ocean and coastal resources are managed to reflect the relationships among all ecosystem components, including human and non-human species and the environments in which they live.

tures, including humans, and considers the interactions among multiple activities that affect entire systems”. Wholesale application of this principle requires that relevant geographic management areas are defined based on ecosystem, rather than political boundaries. This will be challenging, to say the least.

The report delineates eight possible Large Marine Ecosystems (LME) for the U.S., that “encompass coastal areas out to the seaward boundaries of the continental shelves and major current systems, and takes into account the biological and physical components of the marine environment as well as terrestrial features such as river basins and estuaries that drain into these ocean areas” (USCOP, 2004). Connecticut is included in the Northeast LME, which, as proposed, encompasses the area from Maine to Cape Hatteras.

Three Themes for Change

The existing structure of authorities and programs that manages our oceans and coasts is fragmented, unable to meet all of the needs and challenges that must be addressed.

Therefore, the USCOP identifies necessary changes based on three fundamental and cross-cutting themes:

- Create a new national ocean policy framework to improve decision-making
- Strengthen ocean and coastal science and generate high-quality accessible information to inform decision-makers
- Enhance ocean education to instill future leaders and informed citizens with a stewardship ethic

To create a new framework for national ocean policy, the USCOP first recommends that federal leadership and coordination be improved. A proposed first step is to establish a National Ocean Council within the Office of the President, chaired by an Assistant to the President and composed of all cabinet secretaries and independent agency directors with ocean-related responsibilities. Next, they recommend that a presidential Council of Advisors on Ocean Policy be established, consisting of nonfederal representatives (e.g. state, territorial, tribal, and local governments,

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Who are the Members of the U.S. Commission on Ocean Policy?

Admiral James D. Watkins, USN (Ret.)

Chairman and President Emeritus, Consortium for Oceanographic Research & Education, Washington, D.C.

Robert Ballard, Ph.D.

Professor of Oceanography, University of Rhode Island

Ted A. Beattie

President and CEO, John G. Shedd Aquarium, Chicago, IL

Lillian Borrone

Former Asst. Executive Director, Port Authority of NY and NJ

James M. Coleman, Ph.D.

Boyd Professor, Coastal Studies Institute, Louisiana State University

Ann D'Amato

Chief of Staff, Office of the City Attorney, Los Angeles, CA

Lawrence Dickerson

President and COO, Diamond Offshore Drilling Inc., TX

Vice Admiral Paul G. Gaffney II, USN (Ret.)

President, Monmouth University, NJ

Marc J. Hershman

Professor, School of Marine Affairs, University of Washington

Paul L. Kelly

Senior Vice President, Rowan Companies, Inc., TX

Christopher Koch

President and CEO, World Shipping Council, Washington, D.C.

Frank Muller-Karger, Ph.D.

Professor, College of Marine Science, University of South Florida

Edward B. Rasmuson

Chairman of the Board of Directors, Wells Fargo Bank, Alaska

Andrew A. Rosenberg, Ph.D.

Dean, College of Life Sciences & Agriculture, University of New Hampshire

William D. Ruckelshaus

Strategic Director, Madrona Venture Group, Washington

Paul A. Sandifer, Ph.D.

Senior Scientist, National Oceanic and Atmospheric Administration, South Carolina

Executive Director, Thomas Kitsos, Ph.D.

nongovernmental organizations, academics, and private sector entities). This latter Council would create a formal means for nonfederal stakeholders to provide input on ocean and coastal policy matters. The USCOP also recommends steps to streamline the implementation of national ocean and coastal policies, that also enhance the ability of agencies to address links among ocean, land, and air. For example, they emphasize that NOAA should be the lead agency for ocean and coastal programs, but also point out that the agency needs to be reconfigured and strengthened. Overlapping and redundant programs among all agencies with ocean and coastal responsibilities should be consolidated to increase efficiency and effectiveness.

In keeping with the LME concept, the Commission also proposes that voluntary, nonregulatory regional ocean councils be established, to enable state, territorial, tribal, and local entities to develop regional goals and priorities, improve responses to regional issues, and improve coordination. Initially, pilot projects could be started where interest and capacity are strongest. These regional councils would facilitate coordination with federal entities to address connections and conflicts among watershed, coastal, and offshore resources and their uses that cross jurisdictional lines in a more timely and efficient manner.

The second major theme contained in cross-cutting the report's recommendations is the strengthening of ocean science and making the results and findings more accessible to any interested party. Over the past two decades, the modest amount of federal funding appropriated for ocean research has been cut in half, plummeting from 7% of the total federal research budget to just 3.5% today. The Commission recommends doubling ocean research funding as a

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starting point. The objectives for this increase are to improve scientific understanding of ocean and coastal environments, ensure effective science-based measures are used to protect and restore ocean and coastal resources, and enhance our overall ability to observe, monitor and forecast ocean and coastal conditions.

This last objective involves the implementation of a national Integrated Ocean Observing System (IOOS), based on a backbone of coordinated, interconnected U.S. regional ocean observing systems and linked to the international Global Ocean Observing System. Local data-collecting systems, such as the “My Sound” project for Long Island Sound (www.mysound.uconn.edu), would tie into the IOOS through the Northeast region. The IOOS network would significantly enhance our ability to observe, monitor and forecast ocean conditions, generating numerous economic and environmental benefits.

One goal for IOOS is to have observing systems that operate continuously, rather than intermittently, as is largely the case now. One way to address this is for NOAA to take over the operation of a satellite after NASA completes a project, so that valuable data streams can be maintained. These data can be used in innumerable ways to protect public health and safety alone. For example, the U.S. Coast Guard could use real-time data on wind and currents to predict where a life raft might drift from a disabled or sunken ship, to make the search and rescue mission more efficient.

The USCOP estimates that start-up costs for IOOS alone would approach \$138 million. By 2010, it may cost about \$650 million annually to fully maintain the operational network. It sounds like a lot of

money, but this network could save the U.S. an estimated \$1 billion per year in “enhanced weather forecasts, improved resource management, and safer, more effective marine transportation”.

Still, just having the means to collect large quantities of data continuously is not enough. People need quick and easy access to the data in the form of timely, useful, and relevant information products, in order to facilitate informed decision-making. Turning streams of data into these products necessitates planning, collaboration, and cooperation among federal agencies, academics, and the private sector, otherwise the IOOS will not be the beneficial tool it has the enormous potential to be.

Educate, Educate, Educate

If you polled a sample of people in a coastal community about the ocean, you would find that they appreciate the ocean or coast for a variety of reasons. It soothes, relaxes, and rejuvenates. It provides entertainment through body surfing, sandcastle building, shell collecting, fishing, and birding. It provides livelihoods, transportation, food. But it takes a report like this one to help us more fully understand just how connected our lives are to the oceans, whether we live in sight of it or 1,000 miles away. It is to our mutual benefit that we take steps as a nation to ensure that those making decisions that affect our coasts, oceans, and their watersheds do so in as informed a manner as possible, having access to and making use of good science. Further, it is to our benefit as a nation that a stewardship ethic be nurtured and encouraged in all citizens, young and old. This requires education. The USCOP strongly recommends that ocean science be fully integrated into the

standard science curricula of our nation’s K-12 schools, universities, and colleges, to foster a future generation of marine resource managers, ocean scientists, and environmental stewards. Exciting and effective informal educational programs are needed to awaken and develop the stewardship ethic among the broader adult public.

Ocean Policy is International

The USCOP also looked at our national ocean policy in a global context. They recommend that the U.S. accede to the United Nations Convention on the Law of the Sea immediately. Why do they consider this step important? For more than 200 years, the U.S. participated in the formation of customary international ocean law, a set of uniformly applied rules that nations accept as binding. In 1982, the United Nations Convention on the Law of the Sea codified many of these longstanding laws. This ‘Constitution’ for the oceans “provides a comprehensive delineation of rights, duties, and responsibilities of nations within the territorial sea, EEZ, continental shelf, and high seas” (USCOP, 2004).

Despite its earlier role, however, the U.S. was not among the 145 parties to the Convention in 1982, objecting to rules governing deep seabed mining in areas outside national jurisdictions. Today, the U.S. is still not a party to the Convention, even though most of the provisions we objected to were modified ten years ago. It is hard to be a player if you are not a member of the team, and that is the situation the U.S. is in. This very year, for the first time, the Convention is open to amendment by its partners. The USCOP is concerned that if we cannot participate in the 2004

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Convention, we may lose this important opportunity to ensure that our national interests as a maritime power and coastal state are protected, and that if we do not join, our ability to remain credible as a leader on global ocean issues is questionable.

Public Response

As stated earlier, the Final Draft Report was modified based on the comments received from the Governors, tribal leaders, and interested stakeholders. Broad support for the preliminary draft and its recommendations were expressed, and most comments were generally favorable. For example, an excerpt from the response submitted by former Connecticut Governor John Rowland states "The Commission has rendered a vital service in drawing attention to the significant challenges we face and in sounding a call to action to protect the coastal and ocean resources, uses and values that are so important to every coastal state and to the nation as a whole." Among the biggest concerns expressed related to funding issues, participation of states, territories, and tribes in national policy development, and the need for flexibility in the implementation of such policies. Many of the comments emphasized the need for greater recognition of state responsibilities for management of coastal resources, and for full funding of existing programs before increasing responsibilities by adding new initiatives.

Cost, Timing, and Action

After receiving the report, the President is directed by the Oceans Act of 2000 to consider the recommendations contained in it, consult with state and local governments, and other non-federal stakeholders, and submit his response to Congress

within 90 days. Congress, too, is reviewing the report and beginning to take action. Members of the U.S. House of Representatives recently introduced the Oceans Conservation, Education, and National Strategy for the 21st Century Act, known as Oceans 21, and the National Oceanic and Atmospheric Administration Act, both of which include provisions that address key findings and recommendations of the USCOP. These actions are particularly encouraging given the timing of the report—we are both at war and in an election year. All things considered, the estimated price tag is high but not staggering. The USCOP estimates that it will cost \$1.5 billion to implement the recommendations in the first year, rising to about \$3.9 billion annually in subsequent years. The Commissioners did identify a potential source of revenue to support implementation. They recommend that the U.S. government establish an Ocean Policy Trust Fund, supported with revenues from offshore oil and gas development activities and other new and emerging offshore uses, monies that currently go directly into the Treasury.

This far-reaching report is not easy to summarize in a short article; you've only been given a taste of the 'nutmeats' it contains. There are sections covering sustainable fisheries, marine aquaculture, marine mammals, coral reefs, coastal community development, natural hazards, and offshore energy resources, that haven't been touched upon. It is a good read, even if you just skim through parts, and represents an enormous amount of effort by the Commissioners and their staffs. As the "review phase" shifts to the "action phase," let's hope that the momentum the USCOP report has generated continues, and that appropriate and prompt action is taken to address the shortcomings of our cur-

rent ocean and coastal policies by building a new policy that "balances use with sustainability, is based on sound science and educational excellence, and moves toward an ecosystem-based management approach" (USCOP, July 28, 2004 press statement). This is our opportunity...*carpe diem*.

References

Nancy C. Balcom is Connecticut Sea Grant's Extension Leader and a faculty member of the University of Connecticut's Department of Extension.

Preliminary Report by the U.S. Commission on Ocean Policy, Governors' Draft, Washington, D.C., April 2004.
<http://www.oceancommission.gov>

Editor's note: the Final USCOP Report was issued as this issue went to press - same URL.